Progress in Reporting Mental Hospital Statistics

Fifth Annual Conference of Mental Hospital Statisticians, Bethesda, Md., May 25–26, 1955

DEVELOPMENTS in the field of mental hospital statistics and plans for future activities were the major areas of discussion at the Fifth Annual Conference of Mental Hospital Statisticians in Bethesda, Md., May 25–26, 1955, held under the sponsorship of the National Institute of Mental Health, National Institutes of Health, Public Health Service.

The conference was attended by delegates from the 17 member States forming the Model Reporting Area for Mental Hospital Statistics, and by unofficial observers from 7 other States and a representative of the Veterans Administration (see inset).

Emphasizing the contribution of State statisticians in collecting and publishing data, Dr. R. H. Felix, director of the institute, called attention to signs of the Nation's awakened interest in the whole area of mental health. The legislature in New York State has appropriated a considerable sum of money to be matched with local funds, for the development of a large-scale community mental health program. Other States may follow this precedent. Indications of increased interest are also seen at the Federal level, he reported.

Prepared by the Current Reports Section, Biometrics Branch, National Institute of Mental Health, National Institutes of Health, Public Health Service. The 1954 conference was reported in the September 1954 issue of Public Health Reports, p. 809.

This heightened desire to do something about an age-old problem has brought the realization that trained personnel, particularly biostatisticians, are in short supply. It is urgent that State mental hospital administrators provide statistical programs with much needed personnel and equipment and that they recognize the key position of the statistician in the fight against mental illness.

Recommended Cohort Studies

The Cohort Study Committee, appointed at the 1954 conference, reported on the types of uniform cohort studies to be produced by members of the model reporting area and the types of tabulations which should be required of these States.

Cohort studies, in a mental hospital, are studies in which groups of patients with common characteristics—these might be first admissions of a specified year with given age, sex, and diagnosis—are followed from the date of admission through their hospital experience to a specified end point, such as trial visit, discharge, or death, in order to determine their disposition within specified periods of time after admission.

The committee agreed that the analytical procedures involved in cohort studies are appropriate to the mental hospital situation and that all approaches to these studies are based on simple, basic movement data, which can be calculated manually—a particular advantage if

the hospital does not have access to machine tabulation equipment. Cohort studies permit development of a series of release, death, retention, and readmission rates; they permit more accurate prognoses on groups of patients for the benefit of the medical staff, the patients' families, and others.

Properly designed cohort studies can be used by a State desiring to evaluate its mental hospital operations, for program evaluation and budget justification, for evaluation of different therapeutic programs, for interhospital and interstate comparisons, and for many important areas of research.

The committee recommended that all model reporting area States attempt to develop cohort studies. Earlier in the conference only a few delegates had reported preliminary attempts to analyze data on hospital admissions on a cohort basis.

The recommended studies would be studies of first admissions over a 3-month period (preferably April, May, and June) in a given year or longer, if the longer time is required for adequate sample size. The committee suggested that all States adopt the cohort study approach used at the Warren State Hospital, Warren, Pa., and that States with adequate mechanical facilities and sufficient staff undertake in addition the types of studies made by the Ohio Department of Welfare. When data are recorded in sufficient detail, States might consider producing cohort studies where both the Warren and Ohio approaches are used.

By tracing the outcome of hospitalization of patients admitted over the past 40 years, the Warren study has furnished a veritable gold mine of information to the hospital, the State legislature, and the public. The approach is that of followup from date of admission to date of first significant release, with tabulations by number of months of hospital residence. With this type of study, one can answer the question: What proportion of first admissions will have attained their first significant release within the first 12 months following admission? Date of first significant release is defined as date of placement on convalescent leave (indefinite leave), direct discharge or escape from which the patient does not return within 30 days, whichever comes first, or death in the hospital.

From the cohort studies in Ohio, which determine the status of the patient at stated intervals of time irrespective of his movement to and from the hospital during the intervals covered by the period of observation, one could answer these questions: What proportion of such admissions 1 year after admission and on subsequent anniversaries have been in the hospital continuously? What proportion are in any State mental hospital subsequent to release? What proportion are on leave? What proportion are discharged without subsequent return to a hospital? What proportion died in or out of a State mental hospital?

Routine Tabulations Desired

The committee recommended that, if more and more resources—personnel, time, and money—were to be put into cohort studies, the number of routine tabulations now requested from member States should be reduced. Certain routine tabulations would, of course, continue to be necessary for the State's own administrative use and for the institute to use in compiling its national summaries.

The committee recommended that only certain tables be prepared and submitted to the institute every year and that other tables be submitted once every 5 years, commencing with 1955. A total of 9 tables would be submitted annually.

On an annual basis, a member State will submit a financial statement and a statement of personnel for each of its State mental hospitals so as to provide the institute with data for comparing maintenance costs and personnel ratios in the model reporting area. In addition, States are to submit an annual tabulation on the movement of patient population, by sex.

Separate tabulations for males and females are to be submitted for the following tables, the first group on an annual basis, the second on a 5-year basis:

ANNUALLY

First admissions during the year by age at admission and by mental disorder.

Readmissions during the year by age at current admission and by mental disorder.

Resident patients at end of year by age at end of year and by mental disorder.

EVERY 5 YEARS

Discharges by net length of time in hospital and by mental disorder—first admissions.

Discharges by net length of time in hospital for current admission and by mental disorder—readmissions.

Deaths in hospital during the year by age at death, net length of stay for current admission, and selected mental disorder.

Deaths in hospital during the year by cause of death, age at death, and selected mental disorder.

Resident patients at end of year by age at end of year, time on books from date of admission, and selected mental disorder.

The report of the Cohort Study Committee was approved and accepted by the conference.

Statistics for Consumers

The Committee on Presentation of Lay Materials, another committee appointed at the 1954 conference, stressed the need for having the chief statistician in the State mental hospital system be responsible for the preparation of statistical materials from the point of collection through to the point of final presentation so as to assure valid interpretation. The statistician should not assume the role of a public relations expert. He should provide the basic statistical data needed to answer questions about various aspects of the mental health program and as much interpretative material as necessary to those persons preparing information materials for public consumption.

The committee specifically recommended:

That the National Institute of Mental Health give attention to the possibility of sponsoring in representative communities a number of surveys to obtain much needed data on the incidence and prevalence of mental illness and mental deficiency. Planning for needs and facilities makes it necessary that statistics be up to date, but the only data now available come from several outdated and noncomparable surveys.

That the institute require from each member State certain basic summary totals within 1 to 3 months after the end of the fiscal year in order to facilitate the prompt release of information to the press and national associations. The data of national interest would include total first admissions, readmissions, discharges, deaths, patients in residence and staff personnel at end of year, estimated per capita maintenance expenditures, and estimated financial expenditures. States not members of the area might also be interested in submitting such information.

That the institute consider the sponsoring of studies that would help in determining the most desirable methods of presenting statistical information. Two types were specified—those concerned with evaluating types of presentation in the field of mental hospital statistics and those concerned with determining which particular formats, layouts, and other pertinent aspects of the presentations attract the greatest audiences, are longest remembered, and assist in effecting action.

In the discussion that followed it was pointed out that several new studies are being carried out on prevalence and incidence of mental illness. Among these are the studies by Redlich in the New Haven area, by Rennie in New York City, and by the New York State Mental Hygiene Commission in Syracuse.

There is a body of knowledge available in the studies that the Public Health Education Branch of the Public Health Service has made on evaluating the effectiveness of various types of health education materials as well as in studies which advertising and psychological research personnel have made on presentation techniques. Copies of some of these studies would be made available to area States to see whether the general principles embodied therein are applicable to statistical presentation.

Discussion centered on the problem of how differences in administrative policies among the States, kind of patients admitted, types of facilities available, adequacies of staffs, and so forth, can affect the various indexes used in interstate comparisons of mental hospital accomplishments. Traditionally, in the tabulations published by the Bureau of the Census from 1923 to 1947 and continued by the National Institute of Mental Health since 1947, data for State mental hospitals have not been combined with data from county mental hospitals and from the receiving or psychopathic type of mental hospital because of lack of comparability. However, since changes in function have

Participants in the Conference

Model Reporting Area

Josephine W. Knowles, registrar, State Hospital, Little Rock, Ark.

R. D. Morgan, statistical research officer, State Department of Mental Hygiene, Sacramento, Calif.

Carrie N. Frew, chief, statistical analysis unit, research and statistics, State Department of Public Welfare, Springfield, Ill.

Bernard Dolnick, assistant to the commissioner, State Division of Mental Health, Indianapolis, Ind.

Jack C. Pulliam, biometrics supervisor, State Department of Social Welfare, Topeka, Kans.

Cecil Wurster, chief, division of research and statistics, State Department of Institutions, Baton Rouge, La.

Robert Glass, procedures analyst, State Department of Mental Health, Lansing, Mich.

Thyrza Tyrrell, institutions statistician, State Department of Public Welfare, St. Paul, Minn.

Glenn Slagle, senior statistician, research and statistics, State Division of Public Welfare, Lincoln, Nebr.

Emil Frankel, Ph.D., chief, bureau of social research, State Department of Institutions and Agencies, Trenton, N. J.

Benjamin Malzberg, Ph.D., director, bureau of statistics, State Department of Mental Hygiene, Albany, N. Y.

Donald E. Smeltzer, administrative assistant, research and statistics, State Department of Mental Hygiene and Correction, Columbus, Ohio.

Donald D. Tolliver, director of biometrics, State Department of Mental Health, Oklahoma City, Okla.

Gertrude H. Thompson, statistician, research and statistics, State Department of Welfare, Harrisburg, Pa.

H. H. Ullom, biometrics supervisor, Board for Texas State Hospitals and Special Schools, Austin, Tex.

Edna M. Lantz, statistician, State Department of Mental Hygiene and Hospitals, Richmond, Va.

John W. Mannering, chief statistician, bureau of research and statistics, State Department of Public Welfare, Madison, Wis.

Other participants

Nelson A. Johnson, director of social service, Warren State Hospital, Warren, Pa.

Morton Robins, chief, Resources and Evaluation Division, Reports and Statistics Service, Veterans Administration, Washington, D. C.

Unofficial observers

Florence R. Taylor, chief, mental health statistics, State Department of Mental Health, Hartford, Conn.

Beatrice Harwood, statistician, State Department of Mental Health, Louisville, Ky.

David B. Hoover, biostatistician, State Department of Mental Hygiene, Baltimore, Md.

Thomas F. Pugh, M.D., director, division of medical statistics and research, State Department of Mental Health, Boston, Mass.

Barbara Fischer, research assistant, division of medical statistics and research, State Department of Mental Health, Boston, Mass.

George W. Maxwell, registrar, Montana State Hospital, Warm Springs, Mont.

Robert E. Patton, assistant director, bureau of statistics, State Department of Mental Hygiene, Albany, N. Y.

Margaret F. Allen, director of statistical services, State Department of Mental Health, Nashville, Tenn.

Keith S. Griffiths, chief, section of research and statistics, State Department of Public Institutions, Olympia, Wash.

Rose Sachs, statistician, medical statistics, Veterans Administration, Washington, D. C.

National Institute of Mental Health

R. H. Felix, M.D., director.

Morton Kramer, Sc.D., chief, Biometrics Branch.

Hyman Goldstein, Ph.D., chief, Current Reports Section, Biometrics Branch.

Samuel W. Greenhouse, chief, Experimental Design Section, Biometrics Branch.

Earl S. Pollack, chief, Hospital Reports and Records Unit, Biometrics Branch.

Anita K. Bahn, chief, Outpatient Reports and Records Unit, Biometrics Branch.

Bernard H. Kroll, statistician, Hospital Reports and Records Unit, Biometrics Branch.

occurred in recent years so that some of these hospitals are now operating much the same as the State hospitals, the institute agreed to produce for 1954 and thereafter tabulations for public hospitals combining data for all of the institutions functioning in the same general way.

In discussing the difficulties of comparing improvement and release rates on an interstate basis, it was brought out that there may be considerable variation in the degree of psychiatric impairment at the time of admission as well as at time of release, and this, too, would affect interstate comparisons. A committee appointed to look into this problem will report to the 1956 conference.

The report of the Committee on Presentation of Lay Materials was approved and accepted by the conference.

Reporting Area Tabulations

The Biometrics Branch of the institute presented an analysis of tabulations based on 1953 material from eight member States. In view of some of the difficulties the staff had encountered in comparing this material, the need for the cohort type of analysis was again apparent, and the need for further information regarding administrative practices in the various States was pointed up. Perhaps some of the problems of noncomparability can be eliminated by selecting data pertaining to specific groups of patients rather than attempting to compare all patients in one State mental hospital system with all patients in another system.

Among the editing problems encountered by the biometrics staff working with the State tabulations were failure to convert the old diagnostic terms to the new psychiatric nomenclature, failure to give data in the age and diagnostic breakdowns requested, lack of correspondence between the time periods of the schedules submitted and the time periods specified on the instructions, and lack of agreement among the tabular totals for age, sex, or diagnosis, on the schedules submitted by a State. The need for greater care and accuracy in preparing schedules was stressed.

The Progress Reported

The States represented at the conference last year had indicated the need for certain statistical data on residents who were receiving inpatient care for mental illness under the auspices of the Veterans Administration. As a result the Veterans Administration, through the institute, has supplied the area States with needed and useful tabulations on patients resident in and discharged from VA hospitals. This information gives a more complete picture of the hospitalized mentally ill resident in a member State regardless of place of hospitalization. It was agreed that data on resident patients by claimed residence of the veteran would be the most useful material to be obtained on a yearly basis and that other data might be made available, as needed, at less regular intervals.

Delegates reported on developments and operating problems in their State statistical departments. Additional personnel, space, equipment, and duties have been added in some of the departments. The hospitals in one State now use mark-sense punchcards for routine reporting to the central statistical office, thus making it possible to gather more information per patient with less personnel. The statistical forms for hospital reporting in another State have been revised so that much information can be precoded, thus saving clerical time.

Illustrative of the view expressed at the conference that States have learned to work together for mutual benefit is the fact that since 1951 the model reporting area has grown from 11 to 17 States. Two States, Minnesota and Oklahoma, have joined the area since the 1954 meeting. Seven other States are in the process of developing their central reporting systems. Before too long, it can be expected that at least one-half of the 48 States will have satisfied the criteria for membership in the area.